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Docket No. RSW9-2000-0043-US1

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Floyd et al.**

Serial No.: **09/611,158**

Filed: **July 6, 2000**

For: **Apparatus and Method for Accessing Request Header Information Using a Transcoding Filter Servlet**

Group Art Unit: **2154**

Examiner: **Chang, Jungwon**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

ATTENTION: Board of Patent Appeals and Interferences

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APPELLANT'S BRIEF (37 C.F.R. 1.192)

This brief is in furtherance of the Notice of Appeal, filed in this case on May 3, 2004.

The fees required under § 1.17(c), and any required petition for extension of time for filing this brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate. (37 C.F.R. 1.192(a))

REAL PARTIES IN INTEREST

The real party in interest in this appeal is the following party: International Business Machines Corporation

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1-3, 5-12, 14-23, and 25-29

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: 4, 13, and 24
2. Claims withdrawn from consideration but not canceled: NONE
3. Claims pending: 1-3, 5-12, 14-23, and 25-29
4. Claims allowed: NONE
5. Claims rejected: 1-3, 5-12, 14-23, and 25-29

C. CLAIMS ON APPEAL

The claims on appeal are: 1-3, 5-12, 14-23, and 25-29

STATUS OF AMENDMENTS

Amendments were made in the Response to Final Office Action dated April 4, 2004. The Advisory Action, dated April 14, 2004, indicated that the amendments will be entered upon filing an appeal.

SUMMARY OF INVENTION

The present invention provides an apparatus and method for accessing request header information used to transcode servlet output. The apparatus and method of the present invention includes a preamble that stores request header information from a request sent by a client device. See specification, page 13, lines 6-24; page 14, line 18, to page 15, line 2. The request header information is then provided to the transcoder along with the generated content data. See specification, page 13, line 25, to page 14, line 4. The transcoder then performs appropriate transcoding on the generated content data based on the request header information supplied by the preamble. See specification, page 14, lines 5-15. The transcoded content data is then sent to the client device. See specification, page 14, lines 15-17. In this way, the client device is able to obtain content from a much larger set of content sources than with conventional systems.

ISSUES

The issues on appeal are as follows:

Whether claims 1-3, 5-12, 14-23, and 25-29 are unpatentable as being obvious over *Mohan et al.*, "Multimedia Content Customization for Universal Access," November 1998, SPIE Photonics East, page 1-9.

GROUPING OF CLAIMS

The claims on appeal do not stand or fall in a single group, but are grouped into in the following groups for the reasons set forth in the Argument section below:

Claims 1, 6, 7, 9, 10, 21, 26, and 27 form group A. Claims 2, 5, 11, 12, 14, 22, 25, and 29 form group B. Claims 3 and 23 form group C. Claims 8, 17, and 28 form group D.

ARGUMENT

The Office Action rejects claims 1-3, 5-12, 14-23, and 25-29 under 35 U.S.C. § 103 as being unpatentable over *Mohan et al.*, "Multimedia Content Customization for Universal Access," November 1998, SPIE Photonics East, pages 1-9. This rejection is respectfully traversed.

I. The Prior Art Fails to Teach or Suggest Transcoding Generic Content Data Using Client Device Characteristic Information That Was Received in a Request for Content Data (Groups A-D)

Mohan teaches content customization for diverse device capabilities. *Mohan* states:

> The content customization system is an extension to a Web server. An overview of the system architecture is shown in Figure 1. The content source contains the multimedia content to be delivered by the Web server. First, content is analyzed to extract meta-data used in guiding subsequent transcoding and selection processes. Based on the capabilities of typical client devices, different transcoding modules are employed to generate versions of the content in different resolutions and modalities. A novel data representation, the InfoPyramid, is used to store the multiple resolutions and modalities of the transcoded content, along with any associated meta-data. When the Web server receives a request, it first determines the capabilities of the requesting client device. A customization module then selects from the InfoPyramids, the resolutions or modalities that best meet the client capabilities. This selected content is then rendered in a suitable delivery format (for example, HTML) for delivery to the client.

Mohan, page 3, section 2, first paragraph. Thus, *Mohan* clearly and explicitly states that transcoding is performed before a request is ever received and based only on the capabilities of **typical** client devices to produce a pyramid of client specific versions of content. A customization module that is clearly separate from the transcoding modules then selects content from the pyramid of client specific versions of content. According to the teachings of *Mohan*, the customization module selects content that **best meets** the capabilities of the requesting client.

In contradistinction, the present invention provides a mechanism for formatting content data for presentation on a client device, wherein the content is generated responsive to receiving a request from a client device and transcoded using the client device characteristics. Claim 1 recites:

> 1. A method of formatting content data for presentation on a client device, comprising:

receiving a request for content data, the request having client device characteristic information;

storing the client device characteristic information;

generating generic content data; and

transcoding said generic content data using said client device characteristic information to produce transcoded content data.

Mohan does not teach or suggest transcoding generic content data using client device characteristic information that was received in a request for content data, as recited in claim 1.

The Office Action alleges that Mohan teaches transcoding content data using client device characteristic information on page 5, Section 2.5; page 6, Section 2.6; and, page 9, paragraphs 1, 2. Section 2.5 states:

> Next, content transcoders populate the InfoPyramid structure with multi-resolution, multi-modal versions of the content...
>
> The system has default policies, based [sic.] the capabilities of the typical client devices (see Section 2.1), for deploying these transcoding modules.

Clearly, *Mohan* teaches transcoding content into multiple resolutions and multiple modes based upon default policies. Section 2.6 describes that the customization module that is separate from the transcoders uses the device characteristics as constraints to pick the best content representation. However, since the content is not transcoded using the specific device characteristics of a requesting client, the best representation may not exactly match the capabilities of the client device. For example, if a typical personal digital assistant (PDA) has a screen resolution of 320x320, images in the InfoPyramid of *Mohan* will likely have a resolution of 320x320. However, if a request is received from a PDA with a screen resolution of 320x480, the best match in the InfoPyramid will be a 320x320 image. Clearly, this content is **not** transcoded using the device characteristics of the requesting client device.

On the other hand, the present invention, as recited in claim 1, generates generic content data and transcodes **using the client device characteristic information** received in the request for content data. Therefore, the transcoded content data is specific to the client device actually making the request, which is contrary to the teachings of *Mohan*. In fact, *Mohan* specifically teaches away from transcoding content data responsive to receiving a request for the content data, because content providers have no control over how their content will appear to different clients, there may be legal issues arising from copyright, Web pages are growing increasingly complex

limiting both quality and the amount of customization, and on-the-fly transcoding is difficult to apply to many media types. See *Mohan*, page 1, Section 1. Absent, the examiner pointing out some teaching or inventive to implement *Mohan* to transcode content data responsive to receiving a request for the content data, one of ordinary skill in art would not be led to modify *Mohan* to reach the present invention when the reference is examined as a whole. Absent some teaching, suggestion, or incentive to modify *Mohan* in this manner, the presently claimed invention can be reached only through an improper use of hindsight using the Appellants' disclosure as a template to make the necessary changes to reach the claimed invention.

Independent claims 11 and 21 recite subject matter addressed above with respect to claim 1 and are allowable for at least the same reasons. Since each of claims 2, 3, 5-10, 12, 14-20, 22, 23, and 25-29 depends from one of claims 1, 11, and 21, the same distinctions between *Mohan* and the invention recited in claims 1, 11, and 21 apply for these claims. Additionally, claims 2, 3, 5-10, 12, 14-20, 22, 23, and 25-29 recite other additional combinations of features not suggested by the reference.

II. The Prior Art Fails to Teach or Suggest a Preamble Servlet (Group B)

With respect to claims 2, 5, 11, 12, 14, 22, and 25, the Office Action alleges that *Mohan* teaches a preamble servlet on page 4, paragraph 1, lines 6-8; page 7, paragraph 4, lines 1-7; and, page 8, paragraph 1. Appellants note that none of the cited portions or any other portions of *Mohan* makes any mention whatsoever of a preamble servlet. The Office Action proffers no analysis as to how the various teachings in the cited portions are somehow equivalent to the claimed **preamble servlet**. Therefore, the Office Action does not establish a *prima facie* case of obviousness. The applied reference fails to teach or suggest each and every claim limitation; therefore, claims 2, 5, 11, 12, 14, 22, and 25 are not rendered obvious by *Mohan*.

III. The Prior Art Fails to Teach or Suggest a Transcoding Servlet (Group C)

With respect to claims 3 and 23, the Office Action alleges that *Mohan* teaches transcoding being performed by a transcoding servlet that obtains the client device characteristic information from a preamble servlet on page 2, paragraphs 2 and 6; page 5, Section 2.5, to page 6, Section 2.6. As shown above, the cited portions of *Mohan* fail to teach or fairly suggest a

transcoding servlet that obtains client device characteristic information that is received as part of a request for content data. In fact, the portion of *Mohan* that is cited by the Office Action as teaching this feature specifically states, "[t]he systems generates [sic.] transcoded version of the content items prior to any requests, thus it can handle media items such as video and audio which are difficult to handle in proxies." Clearly, *Mohan* teaches the opposite of the invention recited in claims 3 and 23, because *Mohan* teaches transcoding content **prior to any requests**. Thus, the transcoding in *Mohan* cannot take into account characteristic information that is received as part of a request for content data, as alleged in the Office Action.

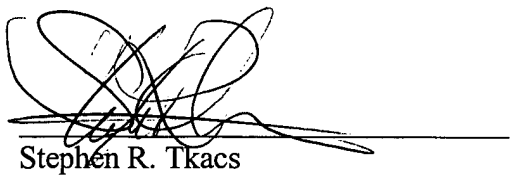
The Office Action proffers no further analysis as to why *Mohan* somehow teaches the features of claims 3 and 23. Therefore, the Office Action does not establish a *prima facie* case of obviousness for these claims. Appellants submit that *Mohan* does not render claims 3 and 23 obvious and the rejection of these claims should be overturned.

IV. The Prior Art Fails to Teach or Suggest Storing Client Characteristic Information and Generating Content Data at Approximately the Same Time (Group D)

Claims 8, 17, and 28 recite that the preamble servlet stores client device characteristic information and the content generator generates the content data at approximately the same time. Since *Mohan* clearly and explicitly teaches that content is transcoded **prior to any requests**, as shown above, *Mohan* cannot teach generating the generic content at the same time the client device characteristic information, which is part of a received request for the content data, is stored. In other words, *Mohan* teaches generating content, transcoding content, and **then** receiving a request. Claims 8, 17, and 28 recite receiving a request having client device characteristic information and **then** storing the client device characteristic information and generating the generic content data. The applied reference fails to teach or suggest each and every claim limitation; therefore, claims 8, 17, and 28 are not rendered obvious by *Mohan*.

V. Conclusion

In view of the above, Appellants respectfully submit that the rejections of claims 1-3, 5-12, 14-23, and 25-29 are overcome. Accordingly, it is respectfully urged that the rejections of claims 1-49 not be sustained.



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APPENDIX OF CLAIMS

The text of the claims involved in the appeal reads:

1. A method of formatting content data for presentation on a client device, comprising:

receiving a request for content data, the request having client device characteristic information;

storing the client device characteristic information;

generating generic content data; and

transcoding said generic content data using said client device characteristic information to produce transcoded content data.

2. The method of claim 1, wherein the step of storing the client device characteristic information is performed in a preamble servlet.

3. The method of claim 2, wherein the step of transcoding is performed by a transcoding servlet, and wherein the transcoding servlet obtains the client device characteristic information from the preamble servlet.

5. The method of claim 1, wherein storing the client device characteristic information includes storing the client device characteristic information in a data structure indexed for retrieval when generating a response.

6. The method of claim 1, further comprising:

generating a response message including the transcoded content data; and

transmitting the response message to the client device.

7. The method of claim 1, wherein the request is an hypertext transport protocol request message, and wherein the client device characteristic information is obtained from a header of the hypertext transport protocol request message.

8. The method of claim 5, wherein the step of storing the client device characteristic information and the step of generating the content data are performed at approximately a same time.

9. The method of claim 7, wherein the header includes at least the client device type and one or more of user identification, passwords, uniform resource locator (URL) requested and HyperText Transfer Protocol (HTTP) method used.

10. The method of claim 1, wherein the method is implemented in a network server.

11. An apparatus for formatting content data for presentation on a client device, comprising:

a preamble servlet;

a content generator coupled to the preamble servlet; and

a transcoding servlet coupled to the content generator, wherein when a request for the content data is received by the apparatus, the request having client device characteristic information, the preamble servlet stores the client device characteristic information in a data structure and the content generator generates generic content data, and wherein the transcoding servlet transcodes the generic content data using the client device characteristic information to produce transcoded content data.

12. The apparatus of claim 11, wherein the transcoding servlet obtains the client device characteristic information from the preamble servlet.

14. The apparatus of claim 11, wherein the preamble servlet stores the client device characteristic information in a data structure indexed for retrieval when generating a response message.

15. The apparatus of claim 11, further comprising a servlet engine that generates a response message including the transcoded content data and transmits the response message to the client device.

16. The apparatus of claim 11, wherein the request is a hypertext transport protocol request message, and wherein the client device characteristic information is obtained from a header of the hypertext transport protocol request message.

17. The apparatus of claim 11, wherein the preamble servlet stores the client device characteristic information and the content generator generates the content data at approximately a same time.

18. The apparatus of claim 16, wherein the header includes at least the client device type and one or more of user identification, passwords, uniform resource locator (URL) requested and HyperText Transfer Protocol (HTTP) method used.

19. The apparatus of claim 11, wherein the preamble servlet echoes the request to the content generator.

20. The apparatus of claim 11, wherein the preamble servlet, content generator and transcoding servlet are implemented in a network server.

21. A computer program product in a computer readable medium for formatting content data for presentation on a client device, comprising:

first instructions for receiving a request for the content data, the request having client device characteristic information;

second instructions for storing the client device characteristic information;

third instructions for generating generic content data; and

fourth instructions for transcoding said generic content data using the client device characteristic information to produce transcoded content data for display on said client device.

22. The computer program product of claim 21, wherein the second instructions are implemented in a preamble servlet.

23. The computer program product of claim 22, wherein the fourth instructions are performed by a transcoding servlet, and wherein the transcoding servlet obtains the client device characteristic information from the preamble servlet.

25. The computer program product of claim 21, wherein the second instructions include instructions for storing the client device characteristic information in a data structure indexed for retrieval when generating a response message.

26. The computer program product of claim 21, further comprising:

fifth instructions for generating a response message including the transcoded content data; and

sixth instructions for transmitting the response message to the client device.

27. The computer program product of claim 21, wherein the request is a hypertext transport protocol request message, and wherein the client device characteristic information is obtained from a header of the hypertext transport protocol request message.

28. The computer program product of claim 21, wherein the first instructions and third instructions are performed at approximately a same time.

29. The computer program product of claim 22, further comprising fifth instructions for echoing the request from the preamble servlet to a content generator.